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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,132	12/01/2003	Mitsuhiro Inazumi	117660	1227

25944 7590 11/29/2005

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EXAMINER	
VO, CLIFF N	

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/724,132	INAZUMI, MITSUHIRO	
	Examiner	Art Unit	
	CLIFF N. VO	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12-24* is/are allowed.

6)☒ Claim(s) *1,3,4,6,7,9,10,12,25,27,28,30,31,33,34 and 36* is/are rejected.

7)☐ Claim(s) *2,5,8,11,26,29,32 and 35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/1/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The IDS paper filed 12/1/2003 has been received and placed in the record of file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 7, 9, 25, 27, 31 and 33 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bright (U.S. Patent No. 6,897,977).

As per independent claims 1 and 7, Bright teaches a method for dividing an image to be processed into one or more square areas, dividing each square area into triangular areas, and coding the divided triangular area (Fig.1A, **10, 14, 16**) comprising a step for inputting the image to be processed and storing the image (col.3, lines 7-10), a step of dividing the input image into one or more square areas (Fig.1A, **10**, col.3, lines 13-14), recurrently dividing each divided square area into triangular areas (Fig.1A, **16**, col.3, lines 16-17), a step of coding the divided triangular areas (Fig.1B, i.e., "code data"

86, col.3, lines 38-58) and a step for outputting the generated coded data (col.9, lines 31-45).

As per dependent claims 3 and 9, Bright further teaches a step for storing the type of shape of the triangular area (col.3, lines 2-6), a step of storing the pixel information of the vertexes and the hypotenuse midpoint of the triangular area (Fig.2, **6, 7**; col.6, lines 44-54, col.7, lines 2-5), obtaining the pixel information of the hypotenuse midpoint of the triangular area (col.6, lines 37-47, i.e., starting at block 26 of Fig.1A, the pixel information of the hypotenuse midpoint, now is a new vertex of the newly created triangular, is obtained at block 28), updating the type of shape of the triangular area, pixel information of the vertexes and the hypotenuse midpoint of the triangular area (col.6, line 55 through col.7, line 7).

Claims 25, 27, 31 and 33 are similar to claims 1, 3, 7 and 9, respectively, Bright further teaches a computer program product for performing a method as now claimed in claims 1, 3, 7 and 9 at col.11, line 67 through col.12, line 8.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4, 6, 10, 12, 28, 30, 34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright (U.S. Patent No. 6,897,977).

As per independent claims 4 and 10, Bright teaches a method for dividing each square area of an image which is divided into one or more square areas into triangular areas, and decoding the divided triangular area (Fig.1A, **10, 14, 16,** Fig.6) comprising a step for inputting the coded image data (Fig.6, **112**), a step for analyzing the input coded data (Fig.6, **114-122,** col.11, lines 2-18), a step for recurrently combining triangular areas on the basis of the coded data and outputting the image data (col.11, lines 45-50, i.e., placing triangular areas together).

It should be noticed that Bright fails to implicitly teach a step for combining a square area on the basis of the combining triangular areas and reconstructing the image data from the combined square areas. *However, Bright uses a decompressing technique having reversing the steps used in creating the compressed image data as discussed in above (col.11, lines 2-4). Furthermore, Bright teaches combining all the triangular areas (col.11, lines 45-49).* Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that by rearranging the small right triangular areas, *in reversing step of dividing as shown in Fig.2*, Bright would have included a step for combing a square area on the basis of the combined triangular areas as now claimed.

As per dependent claims 6 and 12, Bright further teaches a step for storing the type of shape of the triangular area (col.3, lines 2-6), a step of storing the pixel information of the vertexes and the hypotenuse midpoint of the triangular area (col.3, lines 38-50), obtaining the pixel information of the hypotenuse midpoint of the triangular area (col.6, lines 37-47, i.e., starting at block 26 of Fig.1A, the pixel information of the

hypotenuse midpoint, now is a new vertex of the newly created triangular, is obtained at block 28), updating the type of shape of the triangular area, pixel information of the vertexes and the hypotenuse midpoint of the triangular area (col.6, line 55 through col.7, line 7).

Claims 28, 30, 34 and 36 are similar to claims 4, 6, 10 and 12, respectively, Bright further teaches a computer program product for performing a method as now claimed in claims 4, 6, 10 and 12 at col.11, line 67 through col.12, line 8.

Allowable Subject Matter

7. Claims 13-24 allowed.

8. Claims 2, 5, 8, 11, 26, 29, 32 and 35 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: none of the cited prior art teaches an image processing device comprising an image input device/coded data input device, a square-area dividing device/square area combining device, a recurrently triangle-area dividing device/a recurrently triangular area combing device as claimed in claims 13-24; and wherein the number of pixels contained in one side of the square area generated in the dividing the input image, as claimed in claims 1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 31 and 34, being two raised to the N-th power + 1, wherein N is a natural number as now claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLIFF N. VO whose telephone number is 571-272-7651. The examiner can normally be reached on 2nd Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLIFF N VO
Examiner
Art Unit 2676

CV

Matthew C. Bella

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